Public Page

This project is based on ongoing efforts by GTI and EWI to improve field welding and coating practices. This combined expertise, data, and experience will be augmented by our pipeline welding contractor, pipeline operator and coating manufacturer/applier partners.

During the first quarter of the project:

GTI/EWI researched current in-field welding and coating practices which included literature search pertaining to welding of pipelines, specification of line pipe, guide for welding mild steel pipe, pipeline joint coating (e.g., API 1104, API 5L, ASME B31.3, ASME B31.4, AWS D10.12, NACE RP0105-2005, RP0178-2003, RP0303-2003, and SSPC-PA 1) and formulated survey questions to assess existing approaches and practices that pipeline welding contractors use during pipeline construction that could affect the integrity and quality of field applied coatings. Pipeline operators will be surveyed pertaining to hot tap branch connections and repair devices that are installed in subsequent service, as well as with regard to coating system failures at field joints and appurtenances.

Once the survey is completed, GTI/EWI will develop protocols to improve welding-coating coordination. GTI/EWI and partners will weld and coat test sections using the existing and improved protocols and validate improvements with accelerated corrosion/coating tests. GTI/EWI will develop field protocols to improve (1) welding and field application practices and (2) coordination between the welders and coaters. This may include changes to current welding and post-welding procedures, coating surface preparation and application procedures, and coating selection. A set of clear/concise recommendations will be submitted for incorporation into consensus guides and recommended practices (e.g., NACE/SSPC, AWS, API, AGA, etc.)

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